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ABSTRACT

This study is part of a comprehensive program evaluation effort at Michigan State University. The evaluation traces the progress of students from the time they enter a teacher preparation program, through five or six years following graduation. The study focuses on students who graduated from one of the five preparation programs one to two years prior to the survey. A summary of responses to an 81-item questionnaire, sent to a census of all students who graduated from fall term 1983, to spring term 1984 was completed by 124 individuals. Major sections of the questionnaire provide: (1) background information (e.g., level of certification of respondents); (2) a description of employment history (e.g., respondent's first job following graduation); (3) self-ratings of specified areas of "on-the-job" teaching performance; (4) ratings of the contribution of teacher education programs to the development of teaching competencies; (5) critiques of each program (e.g., the most beneficial characteristics of the program); and (6) descriptions of the respondent's plan for graduate study. Statistics are displayed on tables with brief narrative analyses. T-Test results are appended. (JD)

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Research and Evaluation in Teacher Education

Program Evaluation Series No. 11

UNDERGRADUATE FOLLOW-UP STUDY
Spring, 1985

R. Fotiu, D. Freeman, & B. West

Department of Teacher Education
and
Office of Program Evaluation

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Program Evaluation Series No. 11

UNDERGRADUATE FOLLOW-UP STUDY
Spring, 1985

R. Fotiu, D. Freeman, & B. West

Overview: Undergraduate Follow-Up Study
Spring, 1985

This study is part of a comprehensive program evaluation effort at Michigan State University. The overall evaluation design traces the progress of students from the time they enter a teacher preparation program, through five or six years following graduation. This "short-term" follow-up study was completed in the spring of 1985 and focuses on students who graduated from one of Michigan State's five teacher preparation programs approximately one to two years prior to the survey. The purpose of this report is to provide a summary of the information contributed by this group to the ongoing development and improvement of Michigan State's teacher preparation programs.

PROCEDURE

Instrument: The "Survey of MSU College of Education Graduates" is an 81 item questionnaire designed by the Office of Program Evaluation (OPE) and the Undergraduate Program Evaluation Committee (UPEC). Major sections of the questionnaire provide: (a) background information (e.g., level of certification of the respondents); (b) a description of employment histories (e.g., respondents' first job following graduation); (c) self-ratings of specified areas of "on-the-job" teaching performance (e.g., "responding appropriately to disruptive student behaviors"); (d) ratings of the contribution of teacher programs to the development of teaching competencies; (e) critiques of each program (e.g., the most beneficial characteristics of the program); and (f) descriptions of the respondents' plan for graduate study.

Sample: The short-term follow-up questionnaire was mailed to a census of all students who graduated from the four alternative teacher preparation programs, Academic Learning, Heterogeneous Classrooms, Learning Community,

and Multiple Perspectives from fall term 1983, to spring term 1984. Because these four programs have many common features and a relatively small number of graduates, they will be grouped as "Alternative Programs" for some analyses. Surveys were also sent to a random sample of one-half of the individuals who graduated from the Standard Program. The questionnaires were sent out on May 24, 1985. A second mailing was conducted ten days later to all students who had not replied by that time. Of the 229 questionnaires that were mailed, eight were returned with no forwarding address and 124 (56%) were completed. Return rates for each program are summarized in Table I.

TABLE I

Return Rates by Program

PROGRAM	NUMBER DELIVERED	NUMBER RETURNED	RETURN RATE
Standard	153	76	50%
Academic Learning	28	15	54%
Heterogeneous Classrooms	13	9	69%
Learning Community	11	6	55%
Multiple Perspectives	16	11	68%
Undetermined Program		7	
TOTALS	221	124	

Because participants chose to skip questions and some questions did not apply to all respondents, the usable sample was generally smaller for any given analysis than may be implied from the above table. Also, one must keep in mind that 44% of the target sample chose not to participate. It is an open question whether or not these nonparticipants were systematically different from the participants.

Statistical Analyses: The primary purpose of the statistical analyses was to summarize participants' responses to the survey. Most of the summary information presented in this report is based on frequency counts tabulated for each response option on each question. However in some cases, a group of

questions that were conceptually related and measured on a Likert Scale were pooled together to create a scale score. For example, an individual's responses to six items dealing with job satisfaction were added together and then averaged to produce a score on the General Job Satisfaction Scale. T-tests were used to compare graduates of the Standard Program with those of the Alternative Programs on this scale and on another scale constructed in a similar fashion. Also, for other items measured on a Likert Scale a t-test or Hotellings T-squared statistic were used to compare the two groups of alumni for the univariate and multivariate cases respectively. Some questions have been crosstabulated with other related questions in an attempt to determine any statistical association or relationship. A Chi-square statistic was usually used to assess this relationship.

For interpreting the results of this study, it is important to recognize that the multinomial distribution of the responses to the options of each question requires a large sample size for precise and stable estimates of each percentage listed in the frequency tables. Also, the Chi-square statistic is a large sample statistic and the limited sample size may produce misleading values for this statistic and its associated level of significance.

Generally, an alpha level of .05 was used as a basis for deciding which results would be presented in this report. This criterion is more of an indication of potentially important findings rather than a strict guard against the probability of a Type I error.

The statistical analyses included in this report are a subset of those that have been suggested by the OPE staff and the UPEC. These analyses are not meant to exhaust all possibilities of important findings. Rather, this report is intended to provide an overview of some of the results that appear most significant at this time.

BACKGROUND INFORMATION

Sixty-three percent of the respondents earned elementary teaching certificates, 27% secondary certificates, and 11% K-12 certificates. Table II includes these percentages along with the breakdown across teacher preparation programs. Table II also indicates the number of special education certificates and early childhood endorsements received by the respondents in each program. Among all respondents, 17% earned a special education certificate and 9% an early childhood endorsement.

TABLE II

Certification of Respondents

Program	A. Certification Level Elementary	Secondary	K - 12	B. Additional Certification Special Education	Early Childhood
Standard	(41) 55%	(24) 32%	(10) 13%	(15)	(8)
Alternative	(32) 78%	(7) 17%	(2) 5%	(4)	(2)
TOTALS	(73) 63%	(31) 27%	(12) 10%	(19)	(10)

*Notes. The figures in parentheses are the number of respondents in each category.

Only a few respondents reported that they had difficulty with teacher certification. Of the 15% who experienced some difficulty, the problem areas stem largely from meeting special certification requirements. These stated problem areas include: (1) a special class (e.g., Texas Government) not required for Michigan certification; (2) professional tests (Florida Certification Examination, the NTE) either not available and/or not required at Michigan State; or (3) endorsements in special areas (e.g., math) in addition to regular teaching certification.

Most recent graduates of MSU's teacher education programs continue living in Michigan. Eighty percent of the respondents report that they are currently living in Michigan (40% in the Lansing area), 19% in other states and 1% in a foreign country. Apparently most graduates are able to find satisfactory employment within the state and see no compelling reason to

leave. Not only do graduates tend to stay in Michigan, they tend to stay close to home. Thirty percent live in the same community in which they went to high school, 13% in a neighboring community and 20% within 50 - 100 miles of their former high schools.

EMPLOYMENT HISTORY

Since the teacher preparation program has a rather specific occupational objective, it is interesting to note that a sizable proportion of the sample felt that finding a job in the field of education was not that important. Twenty-nine percent felt that finding a job in education was somewhat important, not important, or they did not even bother to search for a teaching position. On the other hand, 51% felt that finding a job in education was very important.

When asked to rate the importance of finding a job in a specific geographic area the sample was distributed fairly uniformly across the five response categories ranging from not important to essential. The largest percentage of respondents, 27%, selected the middle category on the scale, somewhat important.

The vast majority, 81% of the graduates, have held a job in the field of education. The most frequent first job in education was substitute teaching. The frequency of various types of initial positions in education are listed in Table III.

TABLE III

Types of Initial Jobs in Education

Job Classifications	Absolute Frequency	Adjusted Frequency (Pct.)
Substitute Teaching	49	49.5%
Teacher's Aide	6	6.1%
Part-Time Teaching	7	7.1%
Full-Time Teaching	27	27.3%
Other Positions in Education	10	10.1%
Not in Education	23	-----
Missing	2	-----
TOTAL	124	

Of the graduates who did find jobs in education, 83% felt that personal contacts and initiative were the most helpful in securing this initial position. The Michigan State University Placement Service and a faculty member were selected as the most helpful resource by 14.9% and 2.1% respectively.

A Chi-square test was conducted to determine if there was a statistical relationship between program affiliation and success in finding a job in education. The Chi-square statistic indicated that there was no relationship with $p < .83$. Graduates of the Standard Program and Alternative Programs appear to have equal success in finding a job in education.

This sample included graduates from 1983 to 1984. As expected, there were some important changes in job status after securing initial positions in education. Seventeen of the 49 graduates who began as substitute teachers found full-time teaching positions. Only four respondents have left the field of education. The distribution of current types of jobs held in education are summarized in Table IV.

TABLE IV

Current Types of Jobs Held in Education

Job Classifications	Absolute Frequency	Adjusted Frequency
Substitute Teaching	24	27.0%
Teacher's Aide	3	3.4%
Part-Time Teaching	4	4.5%
Full-Time Teaching	48	53.9%
Administration	1	1.1%
Other Positions in Education	5	5.6%
No Longer in Education	4	4.5%
Never in Education	23	----
Missing	12	----
TOTAL	124	

Two scales were created to measure the graduates' satisfaction with their first job in education. The first scale was the General Job

Satisfaction Scale and consisted of six items measuring the following dimensions: intellectual stimulation of the workplace, affective/interpersonal climate, geographic location, opportunities for personal advancement, level of personal challenge, and salary/fringe benefits. Each of these items was measured on a five-point Likert Scale ranging from 1, abysmal to 5, excellent. The General Job Satisfaction Scale scores were transformed back to the original metric of the items.

The reliability coefficient alpha for this General Job Satisfaction Scale was equal to .74. The mean for the entire sample was 3.40. The highest rating of an item on this scale was for the geographic location of their first job. This item received a mean rating of 3.99. The salary/fringe benefits obtained from their first job received the lowest rating, 2.79. The results of a two-tailed t-test indicated that there was not a significant difference between the Standard Program and Alternative Programs graduates in general job satisfaction (see Appendix A1).

The other job satisfaction scale was a four item Teaching Satisfaction Scale and it was created in the same manner as the General Job Satisfaction Scale. This scale consisted of measures of the following dimensions: opportunities to apply what they learned in their teacher preparation program, chance to teach at their preferred grade level, chance to teach their favorite subjects, and opportunity to teach in their preferred school setting.

The average score for the entire sample on this scale was 3.49 and this scale's reliability coefficient alpha was equal to .78. The highest mean, 3.69, was for the graduates' rating of their opportunities to teach in a preferred school setting (e.g., urban versus suburban). The lowest mean rating of an item in this scale, 3.33, was for the respondents' perception of their opportunities to apply what they learned in their teacher preparation

program. A two-tailed t-test (see Appendix A2) indicated that the mean score on the Teaching Satisfaction Scale for Alternative Programs graduates ($x = 3.77$) was significantly higher than that for the Standard Program graduates ($x = 3.33$).

Shortcomings of the initial job in education posed serious enough problems for 30.9% of the respondents that they actively searched for another job. Members of this group were asked to circle items on either of the satisfaction scales to indicate specific job characteristics that "posed a serious problem." Table V lists the items on these two scales in rank order from those that were most often cited as a serious problem to those that were cited least often.

TABLE V

Rank Order of Job Qualities that Posed Serious Problems

Frequency	Rank	Job Quality
16	1	salary/fringe benefits
12	2.5	opportunities for professional advancement
12	2.5	level of personal/professional challenge
11	4	opportunities to apply what you learned in your teacher preparation program
10	5	affective/interpersonal climate
9	6	intellectual stimulation of the workplace
3	7.5	chance to teach at your preferred grade level
3	7.5	opportunities to teach in preferred school setting
2	9	geographic location
1	10	chance to teach your favorite subjects

*Note. The 26 individuals indicating specific problem areas generally responded more than once.

Twenty-three respondents (19.3%) indicated they have never held a job in the field of education. Nine of these individuals said they did find other jobs. Six members of this group said they were underemployed in their first job, and three regretted they were not teaching.

DESCRIPTION OF SCHOOL ENVIRONMENT

All of the graduates who responded to this section of the survey dealing with school environments had at least one year of full-time teaching

experience. Since this portion of the survey pertained only to full-time teachers, the applicable sample was reduced to 54 respondents. Tables VI and VII provide some basic descriptive information that characterizes this group of respondents' most recent full-time teaching assignments. Table VI portrays (a) grade level assignments, (b) school characteristics, and (c) student characteristics. Table VII describes the type of courses taught by secondary teachers.

TABLE VI

Description of Full-Time Teaching Assignments

A. Grade Assignment	Percent (n = 48)	B. Type of School	Percent (n = 51)	C. School Setting	Percent (n = 48)
Preschool	10.4	Public	74.5	Inner-City	14.6
Early Elementary	22.9	Private	17.6	Urban	27.1
Upper Elementary	16.7	Parochial	7.8	Suburban	22.9
Middle/Jr. High	14.6			Rural	35.4
Senior High	35.4				

D. School Size	Percent (n = 46)	E. Proportion of Minority Students	Percent (n = 54)	F. Student Motivation	Percent (n = 52)
< 250 Students	19.2	< 5 Percent	50.0	Very High	5.8
250-500 Students	28.8	5-24 Percent	13.0	High	26.9
500-1000 Students	36.5	25-49 Percent	13.0	Average	34.6
> 1000 Students	15.4	50-75 Percent	11.1	Low	28.8
		> 75 Percent	3.0	Very Low	3.8

*Note. The above entries are percentages adjusted for missing data (N = 54).

TABLE VII

Courses Taught in Major and Minor Fields
for Graduates Teaching in Secondary Schools

A. Proportion of Courses Taught in Your Major	Percent (n = 24)	B. Proportion of Courses Taught in Your Minor	Percent (n = 24)
All	50.0	All	8.3
Most	16.7	Most	4.2
Some	8.3	Some	25.0
None	25.0	None	62.5

*Note. Table 7 entries are percentages adjusted for missing data (N = 30).

The survey included two questions focusing on the relations between the perspective emphasized in the graduates' teacher preparation program and the conditions of the current teaching assignment. Responses to these questions are summarized in Table VIII.

TABLE VIII

Relationship of Teacher Preparation Program Perspective to Current Teaching Assignment

A. "To what extent is your teaching consistent with the perspective on teaching that was emphasized in your teacher education program?"

Response Options	Absolute Frequency	Adjusted Frequency (pct.)
Very Consistent	13	25.5
Somewhat Consistent	22	43.1
Somewhat Inconsistent	7	13.7
Very Inconsistent	1	2.0
No TE Program Emphasis	8	15.7
Missing	3	----
TOTAL	54	

B. "To what extent do other teachers and administrators in the building in which you work support your efforts to apply the perspective on teaching that was emphasized in your teacher education program?

Response Options	Absolute Frequency	Adjusted Frequency (pct.)
Strong Support	9	22.0
Some Support	23	56.1
Neutral Support	8	19.5
Discourage to Some Extent	0	0.0
Actively Discourage	1	2.4
Missing	5	----
TOTAL	54	

The two teacher preparation groups were compared on items A and B in Table VIII. Graduates of the Alternative Programs were more likely to say that their teaching was more consistent with the perspective on teaching emphasized in their teacher education program ($p < .008$, see Appendix B1).

When the same two groups were compared on the extent their efforts to apply the perspective on teaching that was emphasized in their teacher education program were supported by their coworkers, there was no difference ($p < .978$, see Appendix B2).

PERCEPTION OF COMPETENCY IN THE CLASSROOM AND THE EXTENT TO WHICH THE TEACHER EDUCATION PROGRAM CONTRIBUTED TO THIS COMPETENCY

The teacher education graduates were asked (a) to rate their ability to apply thirteen areas of knowledge or teaching competencies in the classroom and then (b) to rate the extent to which their teacher education program contributed to the development of each of these areas. These thirteen areas are listed in Table IX. Only 46 teacher education graduates who indicated they had at least one year of full-time teaching were included in these analyses.

Ratings of teaching performance were made on a four-point Likert Scale. The categories for this scale from 1 to 4 were exemplary, very good, good, and somewhat limited. The contribution of their teacher education program was measured on a five-point Likert Scale. The five categories from 1 to 5 were very strong, strong, moderate, little, and none respectively. Mean ratings of performance and the contribution of the teacher preparation program are shown for each of the thirteen areas in Table IX presented on the following page.

Graduates of the Standard Program and the Alternative Programs were compared to determine if they rated their teaching performance and the contribution of their teacher preparation program to the development of these abilities in a similar manner. It is interesting to note that the two groups rated their performance in a very similar manner ($p < .4026$, see Appendix C1). However, relative to graduates of the Standard Program, the Alternative Programs group perceived that their teacher preparation program made a larger contribution to the development of these thirteen abilities ($p < .0508$, see Appendix C2).

TABLE IX

Mean Ratings of Performance and Program Contribution for 13 Areas of Knowledge and Competency (n = 46)

Performance Means			Contribution Means
2.261	A.	Designing lessons, units and courses of study	2.543
2.261	B.	Deciding what content to teach	3.022
2.087	C.	Establishing effective working relations with students from diverse cultural and academic backgrounds	2.783
2.304	D.	Establishing an effective learning environment	2.457
2.609	E.	Responding appropriately to disruptive student behaviors	3.152
2.652	F.	Establishing a classroom environment in which students actively take responsibility for others in the group	3.087
2.587	G.	Applying effective methods of teaching specific subjects such as reading and mathematics	2.587
2.609	H.	Providing instruction that addresses individual needs and achievements	2.652
2.522	I.	Insuring that most students have a thorough understanding of the content, structure, and significance of the subject matter	2.696
2.370	J.	Maintaining active student participation in classroom tasks	2.696
2.304	K.	Assessing student learning	2.652
2.174	L.	Making instructional decisions in a sound and defensible manner	2.522
2.152	M.	Analyzing and improving one's own classroom performance	2.196

*Note. Lower means indicate higher ratings.

The Alternative Programs group rated their teacher education program as making a stronger contribution to their teaching abilities. The items that appear to have contributed the most to the overall difference between groups were: item C, working with students from diverse backgrounds; item J, maintaining student participation; item D, establishing an effective learning environment; and item F, establishing a classroom environment that emphasizes student responsibility (see Appendix C3, C4, C5, and C6 respectively). In addition, group differences on items B, H, and I (see Appendix C7, C8, and C9 respectively) were large enough to be potentially meaningful.

CONTRIBUTION OF UNDERGRADUATE EXPERIENCES

One section of the questionnaire focused on graduates' perceptions of the sources of their professional knowledge. Survey participants with at least one year of full-time teaching experience were asked to indicate the extent to which each of the thirteen undergraduate experiences listed in Table X contributed to their level of preparation for teaching. Each item was scored on a five point Likert Scale. The five response categories from 1 to 5 were, very strong contribution, strong contribution, moderate contribution, little contribution, and no contribution or does not apply. Twenty-four respondents from the Standard Program and 16 respondents from the Alternative Programs were included in the analyses described in this section.

A multivariate test comparing the two teacher preparation groups on the thirteen items indicated that responses of graduates of the Alternative Programs were statistically different from those of the Standard Program, ($p < .014$, see Appendix D1). Relative to their Standard Program counterparts, the Alternative Programs group indicated that their undergraduate experiences contributed more to their level of preparation for teaching on all items but one. The items that yielded statistically significant differences and appear to have contributed most to the overall difference between the two groups were items number 55, 58, and, 63 (see Appendix D2, D3, and D4 respectively). These items dealt with methods courses, structured experiences focusing on the synthesis of educational knowledge and practice, and college faculty who worked with the respondents in K-12 classrooms (see Table X). Also, items 57 and 59 appear to have made some contribution to the difference between the two groups (see Appendix D5 and D6). The only exception to the otherwise consistent pattern of differences was for item 61, reading books or articles dealing with education or with the respondents' teaching major or minor(s). The Standard Program graduates rated this item higher, but the difference was not significantly different with ($p < .325$, see Appendix D7).

Items focusing on sources of professional knowledge are listed in Table X along with the ranking of their importance for each of the two teacher preparation groups. The 13 items are ranked from the source with the smallest mean (most contribution) to the source with the largest mean (least contribution) for each program group. The item numbers in this table refer to the item numbers in the survey.

TABLE X

Rank Order of Undergraduate Experience Ratings
To Preparation for Teaching

Rank Order			
Standard Program	Alternative Programs	Item No.	Undergraduate Experiences
1	1	60	student teaching (or its equivalent)
2	3	62	the K-12 teachers with whom you worked
3	5.5	53	courses in your teaching major and/or minor(s)
4	10	61	reading books or articles you selected that dealt with education or with your teaching major or minor(s)
5	2	59	early teaching experiences that were required in your program (prestudent teaching)
6	5.5	55	methods of teaching courses
7	8	65	other students in your program
8	4	63	college faculty who worked with you in K-12 classrooms
9.5	9	64	other teacher education faculty
9.5	11	56	educational psychology courses (e.g., child growth and development, psychology of instruction)
11	7	58	courses or lab experiences that focused on the synthesis of educational knowledge and practice
12	12	54	general education courses required by the university (e.g., ATL or natural science)
13	13	57	courses in the foundations of education (e.g., philosophy of education, educational sociology)

TEACHER EDUCATION PROGRAM CRITIQUE

When respondents critiqued their preparation programs, 85% indicated they would still earn a teaching certificate and would recommend the MSU teacher education program from which they graduated to a friend. While the recommendations of both groups were very favorable, the percentages vary

among programs: 96% of the Alternative Programs respondents would recommend their program to a friend compared to 80% of the Standard Program respondents. Moreover, 85% of the respondents from the Alternative Programs indicated that their respective programs were responsive or very responsive to their recommendations and concerns, whereas, only 48% of the Standard Program graduates indicated the same degree of responsiveness.

The respondents were clearly concerned about the quality of their respective preparation programs. When asked, "What changes, if any, do you feel should be made in the teacher education program from which you graduated?" Over 90% suggested changes. Typical responses to this question include the following:

> "...more hands on experience...more field experience...more student teaching...more practical experience...more practical applications...gear more to practical concerns...more experience in schools...a wider variety of school situations..."

In addition to the pronounced recommendation for more varied field experiences, respondents emphasized a need for more extensive preparation in classroom management/control techniques and lesson planning skills. Others commented on the importance/influence of the cooperating teacher. They suggested that cooperating teachers should be selected carefully and be provided supervisory training. Other recommendations include information/preparation for the NTE, information about Michigan's continuing certification requirements, and legal issues in teaching.

Respondents were asked to indicate what they saw as primary program benefits now that they are on the job. Some frequently stated responses included:

> "...student teaching...field work courses...methods courses...direct contact with students...praticum classes...field placements...internships...the work in classrooms each term..."

Although field experiences were mentioned most frequently by respondents, a wide range of other benefits were noted more than once: methods classes,

particular classes, communication between instructors and students, and the unusual amount of individualized attention afforded the respondents by professors.

FUTURE PLANS FOR GRADUATE COURSES

In light of Michigan's continuing certification requirements, it is not surprising that almost all graduates intend to enroll in graduate school. Six percent intend to earn the 30 graduate credits needed for permanent certification and 71% plan to earn a master's degree. But a significant number have even higher academic aspirations. Sixteen percent intend to study for a doctoral degree and 3% for a specialist's degree. Seventy-one percent of the respondents (80 out of 112) plan to do their graduate work in education. Twenty-nine percent (33 out of 112) have already taken one or more graduate courses at Michigan State (24 out of 33) or elsewhere (9). Of the 33 respondents currently enrolled in graduate study, 15 report that their work in their teacher preparation program contributed strongly/very strongly to their preparation for graduate study, although another 15 judged that there was little/no contribution. As a group, Alternative Programs graduates (31 out of 35) indicated they plan graduate work in education more often than Standard Program graduates (45 out of 72). However, a higher percentage of Standard Program graduates are currently enrolled in a graduate course (33%) than Alternative Programs graduates (19%).

All the participants who have had at least one year of full-time teaching experience were asked the following question, "If you could choose one or two graduate courses that would be most helpful to you at the present time, what content would they emphasize?" Courses that emphasize classroom management, discipline, and behavior modification techniques were the most frequently stated responses. This general category of courses was followed closely by courses that emphasized academic subject matter and methods of teaching specific subject areas. Other responses tended to reflect individual interests and concerns.

APPENDIX
T-Test Results

A. Employment History

1. Two group comparison using the General Job Satisfaction Scale score is given below.

Group Labels	Number of Cases	Mean	Standard Deviation	T Value	Two-Tailed Probability
Standard Program	60	3.3067	.076	-1.56	.122
Alternative Program	33	3.5687	.800		

2. Two group comparison using the Teaching Satisfaction Scale score is given below

Group Labels	Number of Cases	Mean	Standard Deviation	T Value	Two-Tailed Probability
Standard Program	60	3.3333	1.022	-2.21	.029
Alternative Program	33	3.7727	.677		

B. Description of School Environment

1. Two group comparison using the ratings of the consistency of their current teaching with the perspective on teaching that was emphasized in their teacher education program is given below.

Group Labels	Number of Cases	Mean	Standard Deviation	T Value	Two-Tailed Probability
Standard Program	30	2.7333	1.461	2.79	.008
Alternative Program	19	1.7368	.653		

2. Two group comparison using the ratings of support they were given by the curren staff they work with for their efforts to apply the perspective on teaching tha was emphasized in their teacher education program is given below.

Group Labels	Number of Cases	Mean	Standard Deviation	T Value	Two-Tailed Probability
Standard Program	22	2.0455	.950	-0.03	.978
Alternative Program	19	2.0526	.621		

C. Perception of Competency in the Classroom and the Extent to Which the Teacher Education Program Contributed to this Competency

1. Two group comparison using all thirteen teaching performance ratings is given below.

T Squared Statistic	F Ratio	Degrees of Freedom		Significance
19.4536	1.0883	13	32	.4026

2. Two group comparison using the ratings of the contribution of their respective teacher preparation programs to the development of all thirteen knowledge and competency areas is given below.

T Squared Statistic	F Ratio	Degrees of Freedom		Significance
36.3447	2.0333	13	32	.0508

3. (C) Two group comparison using the ratings of the contribution of their teache education program to their ability to establish effective working relations wit students from diverse cultural and academic backgrounds is given below.

Group Labels	Number of Cases	Mean	Standard Deviation	T Value	Two-Tailed Probability
Standard Program	28	3.2500	1.041	4.14	.000
Alternative Program	18	2.0556	.802		

4. (J) Two group comparison using the ratings of the contribution of their teache education program to their ability to maintain active student participation in classroom tasks is given below.

Group Labels	Number of Cases	Mean	Standard Deviation	T Value	Two-Tailed Probability
Standard Program	28	3.0000	.981	2.73	.009
Alternative Program	18	2.2222	.878		

5. (D) Two group comparison using the ratings of the contribution of their teache education program to their ability to establish an effective learning environment is given below.

Group Labels	Number of Cases	Mean	Standard Deviation	T Value	Two-Tailed Probability
Standard Program	28	2.7143	.937	2.33	.025
Alternative Program	18	2.0556	.938		

6. (F) Two group comparison using the ratings of the contribution of their teache education program to their ability to establish a classroom environment in whic students actively take responsibility for others in the group is given below.

Group Labels	Number of Cases	Mean	Standard Deviation	T Value	Two-Tailed Probability
Standard Program	28	3.3571	.989	2.33	.025
Alternative Program	18	2.6667	.970		

7. (B) Two group comparison using the ratings of the contribution of their teache education program to their competence in deciding what content to teach is give below.

Group Labels	Number of Cases	Mean	Standard Deviation	T Value	Two-Tailed Probability
Standard Program	28	3.2500	1.041	1.95	.058
Alternative Program	18	2.6667	.907		

8. (H) Two group comparison using the ratings of the contribution of their teache education program toward developing competence in providing instruction that addresses individual needs and achievements is given below.

Group Labels	Number of Cases	Mean	Standard Deviation	T Value	Two-Tailed Probability
Standard Program	28	2.8571	1.008	1.83	.074
Alternative Program	18	2.3333	.840		

9. (I) Two group comparison using the ratings of the contribution of their teache education program toward developing the ability to insure that most students have a thorough understanding of the content, structure, and significance of th subject matter is given below.

Group Labels	Number of Cases	Mean	Standard Deviation	T Value	Two-Tailed Probability
Standard Program	28	2.8929	.994	1.77	.083
Alternative Program	18	2.3889	.850		

D. Contribution of Undergraduate Experiences

1. Two group comparison using all thirteen undergraduate experiences ratings as to the extent these contributed to their level of preparation for teaching is given below.

T Squared Statistic	F Ratio	Degrees of Freedom		Significance
52.2777	2.7515	13	26	.0136

2. (55) Two group comparison using the ratings of the contribution of the methods of teaching courses to their level of preparation for teaching is given below.

Group Labels	Number of Cases	Mean	Standard Deviation	T Value	Two-Tailed Probability
Standard Program	24	2.6667	1.007	2.71	.010
Alternative Program	16	1.8750	.719		

3. (58) Two group comparison using the ratings of the contribution of courses or lab experiences that focused on the synthesis of educational knowledge and practice to their level of preparation for teaching is given below.

Group Labels	Number of Cases	Mean	Standard Deviation	T Value	Two-Tailed Probability
Standard Program	24	3.2917	1.160	3.60	.001
Alternative Program	16	2.0000	1.033		

4. (63) Two group comparison using the ratings of the contribution of college faculty who worked with the teacher education graduates in K-12 classrooms to their level of preparation for teaching is given below.

Group Labels	Number of Cases	Mean	Standard Deviation	T Value	Two-Tailed Probability
Standard Program	24	2.8750	1.227	2.96	.005
Alternative Program	16	1.8125	.911		

5. (57) Two group comparison using the ratings of the contribution of courses in the foundations of education (e.g., philosophy of education, educational sociology) is given below.

Group Labels	Number of Cases	Mean	Standard Deviation	T Value	Two-Tailed Probability
Standard Program	24	3.7083	1.268	1.75	.089
Alternative Program	16	3.0625	.929		

6. (59) Two group comparison using the ratings of the contribution of early teaching experiences that were required in their program (prestudent teaching) is given below.

Group Labels	Number of Cases	Mean	Standard Deviation	T Value	Two-Tailed Probability
Standard Program	24	2.6250	1.555	1.88	.067
Alternative Program	16	1.7500	1.238		

7. (61) Two group comparison using the ratings of the contribution of reading books or articles they selected that dealt with education or with their teachin major or minor(s) is given below.

Group Labels	Number of Cases	Mean	Standard Deviation	T Value	Two-Tailed Probability
Standard Program	24	2.2917	.859	-1.00	.325
Alternative Program	16	2.5625	.814		